

Attunity Connect Installation Guide

OpenVMS

Version 4.1



Attunity Connect Installation Guide for OpenVMS

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OpenVMS Installation

Requirements

Attunity Connect can be installed on the following OpenVMS platforms, each with specific requirements:

- ALPHA (AXP)

In addition to the platform-specific requirements, the following requirements must be met:

- The minimum values required for the system parameters. See page 2.
- The required user quotas. See page 2.

ALPHA (AXP)

The following are the hardware and software required in order to run Attunity Connect on the Alpha AXP platform:

Machine – DEC ALPHA workstations.

Terminal – VT compatible terminals or terminal emulator for setup and configuration.

System disk or VMSINSTAL work disk (temporary) – 60,000 free blocks. If the system disk does not have the required minimum, you can use the VMSINSTAL option AWD (Alternate Working Directory).

Installation target disk – 90,000 free blocks.

Operating System – OpenVMS Version 6.1 and higher.

❖ Attunity Connect comes in version-specific kits.

Communication – TCP/IP – UCX Version 3.3 and higher, TCPware V5 and higher, Multinet and Wollongong.

The system global page/section requirements of Attunity Connect shareable images do not exceed:

Global Pages – 5000

Global Sections – 10

The global page requirements do not exceed 4010 for any data source. The global section requirements do not exceed 5 for any data source.

System Parameters

Verify that the following system parameters have these minimum values:

RESHASHTBL	64
LOCKIDTBL	200
VIRTUALPAGECNT	2048

- ❖ You additionally need to check the prescribed parameters used by other database systems and data dictionaries, such as CDD/Plus, Oracle, Rdb, Sybase, Ingres, and Adabas Predict.

Required User Quotas

The recommended user quotas are:

MAXJOBS:	10
MAXACCTJOBS:	0
MAXDETACH:	0
PRCLM:	The system default
PRIQ:	4
QUEPRIO:	0
CPU:	(none)
FILLM:	100
SHRFILLM:	0
BIOLM:	18
DIOLM:	18
ASTLM:	24
TQELM:	10
ENQLM:	2000
BYTLM:	20480
PBYTLM:	0
JTQUOTA:	1024
WSDEF:	150
WSQUO:	750
WSEXTENT:	3000
PGFLQUO:	Dependent on factors such as the type and size of the databases accessed using Attunity Connect.

Authorized Privileges – CMKRNL, SYSGBL, SYSNAM, PRMGBL

Default Privileges – TMPMBX, NETMBX

These are common quotas. Specific configurations may require that you increase the values of BYTLM, WSEXTENT or PGFLQUO. Check your database requirements to verify the requirements for your system.

Other recommendations include the following:

USER NAME – You can use any naming scheme for Attunity Connect users.

UIC – Attunity Connect users can be assigned any UIC (User Identification Code).

GROUPS – Attunity Connect users can be grouped according to their UIC. In most cases, it is convenient to group together the users of the same applications.

FILE PROTECTION – You can use any combination of the OpenVMS file protection mechanisms. Attunity Connect programs are not privileged, so they are affected by the assigned file protection. To ensure that all users can access the shareable images, protection W:WER must be assigned.

PRIVILEGE – Attunity Connect users need no special OpenVMS privilege beyond the minimal TMPMBX and NETMBX. Since Attunity Connect relies on the system file protection service, you need to make sure that users have the privileges required to access both Attunity Connect software and definitions.

❖ Check data source recommendations as well.

Pre-Installation

Prior to installation, do the following:

- If the system disk does not have the required minimum of free blocks, use the VMSINSTAL option AWD (Alternate Working Directory), as follows:

@SYSS\$UPDATE:VMSINSTAL... OPTIONS AWD=*disk_directory*.
- Choose a directory in which to install Attunity Connect.

Upgrade Installation

If you are installing a patch, replace the appropriate file with the patch and run the NAV_START.COM script to remove the old shareable image and replace it with the new shareable image. (The NAV_SHUT.COM script, which removes the shareable image, is not required, since it is included as part of the NAV_START.COM script.)

- ❖ NAV_SHUT.COM and NAV_START.COM relate to the shareable image only. They do not start or shutdown the Attunity Connect daemon.

If you are upgrading an existing installation of Attunity Connect, make sure NAVROOT is defined to the system. This enables the installation procedure to identify that an existing version exists.

- ❖ The upgrade installation will create a saved copy of NAV_START.COM.

When upgrading Attunity Connect, before doing the installation, backup Attunity Connect repository entries, as follows:

```
NAV_UTIL EXPORT ALL SYS out.xml
```

where *out.xml* is the name (including path) of an XML file where the SYS definitions will be written.

Run the following for every data source accessed by Attunity Connect:

```
NAV_UTIL EXPORT ALL dsname dsout.xml
```

where *dsname* is a data source name, as defined in the binding configuration and *dsout.xml* is the name (including path) of an XML file where the data source definitions will be written.

There are two types of upgrade installation:

- An upgrade installation that overwrites the old version.
 - ❖ You must upgrade all client machines as well as the server machine.

- An upgrade installation that saves the old version, **allowing you to continue using client machines with a previous version of Attunity Connect.**

These different upgrade installations are described in the following sections.

Upgrading and Overwriting the Old Version

To upgrade the version of Attunity Connect on both server and client machines, you must prevent all users from gaining access to Attunity Connect during the upgrade installation.

- ❖ Backup Attunity Connect software before installing the new version.

The file NAVROOT:[BIN]NAV_SERVER remains unchanged during an upgrade installation (so that changes previously made to this file are not lost during the upgrade). If you want the new installation version of this file, delete the file manually before starting the installation.

You must have write permission on all the old Attunity Connect files and the directories where they reside.

Copy any changes that were made in the saved copy of NAV_START.COM to the new script and execute the NAV_START.COM script to load the new Attunity Connect shareable image.

Upgrading a Server While Saving the Old Version

If you want to upgrade the server version of Attunity Connect while keeping the client machines with a previous version, install the new version of Attunity Connect in a directory other than that of the existing version.

Installation

Set up the installation by running the self-extracting executable:

```
$ run ac4100-alphavms
```

This generates two savesets, AC4100041.A and AC4100041.B, which reside in the current directory.

Invoke the VMSINSTAL command procedure from a privileged account, such as the SYSTEM account, as follows:

```
@SYSSUPDATE:VMSINSTAL AC4100041
device_name:[dir_name]
```

- ❖ This procedure is in the SYS\$UPDATE directory.

device_name represents the name of the disk directory where the generated savesets are saved or the device on which you plan to mount the media (for example, MKA400:, MUA0: and MTA0: are device names for tape drives).

dir_name represents the name of the current directory.

- ❖ If you do not specify *device_name*:*[dir_name]*, VMSINSTAL prompts for it. You can use a logical name to specify *device_name*:*[dir_name]*.

For example, if the savesets were generated to ALPHA\$DKA300:[USER.ADMIN], invoke VMSINSTAL as follows:

```
@SYS$UPDATE:VMSINSTAL AC4100041 ALPHA$DKA300:[USER.ADMIN]
```

Prior to running the installation procedure, the VMSINSTAL command procedure prompts you about the current system, including:

Active processes – You are warned if there are additional processes active in the system, and asked if you want to continue anyway.

System backup confirmation – You are asked if you are satisfied with the system backup.

The following table displays installation steps and information you need to specify for each of the Attunity Connect installation steps

Step	Description
Please select the type of installation (1/2) [1]	<p>You can do a normal installation (option 1) or a custom installation (option 2). The default is a normal installation.</p> <p>Normal – This installs and starts Attunity Connect system-wide, providing STARTUP and SHUTDOWN procedures to the system directories SYS\$STARTUP and SYS\$MANAGER, respectively.</p> <p>Custom – The Attunity Connect installation procedure uses built-in defaults. A custom installation gives you more control over the installation procedure. If you use the default answers on all the questions, the custom installation behaves like a standard installation.</p>

Step	Description
<p>Attunity Connect AC4100041 kit requires 57890 blocks. Confirm to continue - Y-es / E-xit [Y]:</p>	<p>If the system disk does not have the required minimum, you can use the VMSINSTAL option AWD (Alternate Working Directory).</p>
<p>Attunity Connect software will be installed on DKB500:[USER.NAV.NAVROOT.] (=NAVROOT)</p> <p>Please confirm - Y-es / N-o [Y]:</p>	<p>Attunity Connect can be installed under any root directory that you choose. You can use physical, logical or concealed device names. The concealed logical NAVROOT points to a fixed directory NAVROOT under the directory of choice. If logical NAVROOT is already defined, its translation is the Default Directory, and this prompt does not appear.</p> <p>If you answer "N" to this question, you are prompted to reenter a root directory. If you want to exit the installation entirely, answer "E".</p>
<p>Do you want to purge files replaced by this installation [Y]</p>	<p>For custom installations only. In a normal installation the files are purged by default. This prompt appears only in upgrade installations and if you are installing to the same directory as the current version of Attunity Connect.</p>
<p>Install interface for: * Rdb [N] ? * ORACLE [N] ? * INGRES [N] ? * SYBASE [N] ? * Codasyl DBMS [N] ?</p>	<p>The databases you accept are automatically installed each time the startup procedure is invoked. This utilizes the system resources more efficiently.</p>
<p>Add file NAV_START.COM to startup database (SYSMAN) [N] ?</p>	<p>Answer "Y" only if you want to insert the startup procedure for Attunity Connect to SYSMAN in phase LPMAIN, thus automatically activating the Attunity Connect startup procedure each time you boot the system. If you answer "N", you need to manually activate SYSS\$STARTUP:NAV_START.COM after every system boot (or you can add it to a command procedure that runs after a system boot – in OpenVMS V6.x, for example, you can add it to SYSS\$MANAGER:SY\$STARTUP_VMS.COM).</p>

Step	Description
Account name <string>:	For custom installations only. The account name is used to set the AnonymousClientAccount parameter for the IRPCD daemon in the daemon configuration. You can change the account after installation. For more detailed information, see "Daemon" in <i>Attunity Connect Reference</i> .
Install Attunity Connect shareables and automatically start the Attunity Connect daemon after installation [Y]?	For custom installations only. The installation procedure normally restarts Attunity Connect after it completes (defining system-wide logical names, installing shareable images and starting network processes). If you answer with "N", the installation procedure does not restart Attunity Connect. In an upgrade installation, the original NAV_START.COM is saved with the name NAV_START.COM_SAVE in the system startup directory. If you specified that you will be using Oracle and/or DBMS databases, the installation attempts to link the Attunity Connect components with the Oracle and DBMS database on the site.
Adding and updating attunity connect configuration on this machine from a remote administration console can only be done by someone defined as an administrator for attunity connect on this machine. Enter a valid user name for an attunity connect administrator [all] :	In order to manage Attunity Connect on this machine from Attunity Connect Studio, you need to enter a user account of a user who will have administrative authorization, or press Enter to enable any user to administer Attunity Connect on this machine. The administrative rights can be changed from within Attunity Connect Studio after the installation or on this machine using NAV_UTIL.ADD_ADMIN as described in <i>Attunity Connect Reference</i> .

Following successful installation, log out of the installation account.

- ❖ If you modified the protection of the system help library, restore the original protection.

If the installation procedure fails, contact Attunity Connect support.

- ❖ The installation procedure creates a log file named `SYSS$UPDATE:NAV-V41.DATA` which is used to help resolve installation problems.

Post-Installation

The following procedures are performed after a successful installation to configure Attunity Connect:

- Configuring an OpenVMS Account to Run Attunity Connect
- Automatic Startup
- Registering Attunity Connect
- Adding Attunity Connect to the Network Services File
- Setting the Language

Additionally, if the installation is an upgrade from a previous version, the following upgrade procedure is performed:

- Upgrading Attunity Connect from a previous Version

DBMS Note – When installing Attunity Connect, Attunity Connect components are linked with the DBMS database on the machine. If the linking failed, for example, if the Attunity Connect installation was done at a time when the DBMS environment was unavailable, perform the following steps:

1. Link the Attunity Connect DBMS driver using the following command:

```
$ @NAVROOT:[BIN]NAV_DBMS_BUILD
```

Continue with the following step if you specified DBMS as one of the data sources during the installation.

2. If you want to install the Attunity Connect DBMS driver (NAVROOT:[BIN]NVDB_DBMS.EXE) as a shareable image, add the DBMS driver to NAV_START.COM in NAVROOT:[BIN] and SYSS\$STARTUP so that stopping and restarting Attunity Connect will install the image. You must restart Attunity Connect after relinking the driver by executing the NAV_START.COM script.
- ❖ If you are upgrading the Attunity Connect DBMS driver from a previous version, the DBMS driver installation links the driver on the site with the current version of DBMS. If you upgrade the DBMS installation to a new version, you may need to relink the Attunity Connect DBMS driver. This is known to be a requirement when upgrading from DBMS 4.3 to the 6.0 series. The following command will relink the driver:

```
$ @NAVROOT:[BIN]NAV_DBMS_BUILD
```

If a new release of Attunity Connect includes changes to the Attunity Connect Data Dictionary, you must update the DBMS metadata in the Attunity Connect Data Dictionary (refer to details in the DBMS driver section in the *Attunity Connect Data Adapter Guide and Reference*).

Oracle Note – When installing Attunity Connect, Attunity Connect components are linked with the Oracle database on the machine. If the linking failed, as may happen when the Attunity Connect installation was done at a time when the Oracle environment was unavailable, run the following commands from a privileged and Oracle-enabled account:

1. `$ @SYS$MANAGER:NAV_SHUT`

The Attunity Connect shareable image is removed.

2. Run the login procedure NAV_LOGIN using its full pathname.
3. `$ @NAVROOT:[BIN]NAV_ORA_BUILD`
4. `$ @SYS$STARTUP:NAV_START`

A new Attunity Connect shareable image is loaded.

Configuring an OpenVMS Account to Run Attunity Connect

Attunity Connect supplies a procedure, NAV_LOGIN, that defines the default Attunity Connect environment when Attunity Connect runs. If you want site-dependent variables to be included in the Attunity Connect environment, create a file called SITE_NAV_LOGIN and save this file in the BIN directory under the Attunity Connect root directory. NAV_LOGIN runs SITE_NAV_LOGIN automatically.

NAV_LOGIN must be invoked to run Attunity Connect. When configuring an OpenVMS account that will run Attunity Connect, if a section of the login script prompts the user for information or interacts with a terminal device, add the following to the relevant section of the login script:

```
$ IF F$MODE ( ) .NES. "INTERACTIVE" THEN EXIT
```

In addition, add the following line to the login script:

```
$ @device: [attunity_connect_root_dir.] [BIN]NAV_LOGIN.COM
```

Make sure that users have read and execute permission on the Attunity Connect files.

If you intend to access a data source that requires initialization, perform this initialization in the SITE_NAV_LOGIN file.

Automatic Startup

If you did not insert the startup procedure for Attunity Connect into SYSMAN, you need to add SYS\$STARTUP:NAV_START.COM to a command procedure that runs after a system boot.

For example, under **ALPHA AXP, OpenVMS Version 6.x**, you can add it to: `SY$MANAGER:SYSTARTUP_VMS.COM`.

Registering Attunity Connect

Note: The Attunity Connect registration is different from the standard OpenVMS PAK registration.

You need to register the copy of Attunity Connect before you can access data sources on this machine, other than Attunity Connect demo data. To use Attunity Connect you must have a Product Authorization Key (PAK) file, called *license.pak*. A PAK is normally supplied by the Attunity Connect vendor. It contains details such as the product expiration date (if any), the maximum number of concurrent sessions allowed, which drivers you are authorized to use, and other information. The PAK is supplied to you in electronic form, and you must register it before you can use the product.

- ❖ If you upgraded a previous version of Attunity Connect, a new license is automatically registered.

► To register a Product Authorization Key:

1. Save the license to a file with an extension other than PAK (such as *license.txt*). This prevents the current license from being manually overwritten.
2. Make sure that `NAV_LOGIN` has been run (see "Configuring an OpenVMS Account to Run Attunity Connect" on page 10).
3. Run the following from an Attunity Connect-enabled account:

```
nav_util register license
```

where *license* is the full name including the path of the license file.

You now have the new license file (*license.pak*) residing in the `DEF` directory under `NAVROOT`, where you installed Attunity Connect.

This procedure registers a new license or updates an existing license on this machine.

You can display the license details by running the following command:

```
nav_util check license
```

The following type of information is returned:

Active licensed items are:

```
APIs: All
Providers: All
Features: All
Options: None
Concurrent Users: 100
```

- ❖ You can register this machine from a PC by running the following:

```
nav_util register license daemon-location
```

where *daemon-location* is the location of the OpenVMS machine.

Adding Attunity Connect to the Network Services File

For information about specifying Attunity Connect as the service using port 2551 in the TCP/IP network services file, consult the TCP/IP documentation.

Setting the Language

National Language Support (NLS) is provided by Attunity Connect for the following languages:

- English (the default)
- Hebrew
- Japanese
- Korean
- Simple Chinese
- Traditional Chinese

The language is specified via the following Attunity Connect environment settings:

- language
- codepage

For full details of NLS, refer to "National Language Support (NLS)" in *Attunity Connect Reference*.

► To define the language and codepage environment settings:

1. Run the following command:

```
nav_util edit bindings
```

The XML representation of the Attunity Connect binding information is displayed, including some XML similar to the following:

```
<environment name='NAV'>
  <misc codePage='' language='' />
  <queryProcessor/>
  <optimizer goal='none' preferredSite='server' />
  <transactions/>
  <odbc/>
  <oledb/>
  <tuning/>
</environment>
```

2. In the language field (bolded in the above XML), specify one of the following for the language required, or leave blank for English):

JPN – Japanese

KOR – Korean

SCHI – Simple Chinese

TCHI – Traditional Chinese

3. Optionally, in the codePage field (bolded in the above XML), specify the codepage required.

You can skip this step, and just specify a language (see the previous step). In this case, a default codepage is used. The following shows the default codepages:

JPN – SDECK

KOR – KO16KSC5601

SCHI – ZHS16CGB231280

TCHI – ZHT16BIG5

The following table lists the supported codepages according to language:

Language	Supported Codepage Values	Description
Japanese	JA16SJIS or SJIS	Shift-JIS 16-bit
	JA16EUC or EUC	EUC 16-bit
	JA16VMS or SDECK	Super DEC Kanji (EUC+) 16-bit
Korean	KO16KSC5601	KSC5601 16-bit
Simple Chinese	ZHS16CGB231280	16-bit Simple Chinese
Traditional Chinese	ZHT16BIG5	BIG5 16-bit Traditional Chinese

Upgrading Attunity Connect from a previous Version

Import all the XML files exported prior to doing the installation, as described in "Upgrade Installation" on page 4. Run:

```
NAV_UTIL IMPORT xml_file_name
```

where *xml_file_name* is the name (including path) of an XML file where the exported information was written.

Silent Installation

A silent installation enables you to perform an installation without having to respond to any prompts. Initially you perform a normal installation and capture, in a file, the responses to the installation prompts. You can then run the installation on another machine using the file containing the captured responses.

► **To install Attunity Connect silently (without prompts), do the following:**

1. Create a response file, by running the installation with the following arguments:

```
@SYS$UPDATE:VMSINSTAL AC4100041 device_name:[dir_name] options a
```

where:

device_name represents the name of the disk directory where the generated savesets are saved or the device on which you plan to mount the media (for example, MKA400:, MUA0: and MTA0: are device names for tape drives).

dir_name represents the name of the current directory.

An Attunity Connect installation proceeds and the responses are recorded in the response file called ac4100041.ans in sys\$update.

2. Run the silent installation with the following command:

```
@SYS$UPDATE:VMSINSTAL ac4100041 device_name:[dir_name] options a
```

The response file (ac4100041.ans) recorded in step 1 is used as input for the installation.